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Theodore D. Kramer



OUR FILE NO.
0090-100-

November 22, 1996

Mr. William F. Caton, Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: Comments In MM Docket No. 87-268

Dear Mr. Caton:

On behalf of Meredith Corporation, I am transmitting an original and nine copies of its Comments on the Sixth Further Notice of Proposed Rulemaking In The Matter Of Advanced Television Systems And Their Impact Upon The Existing Television Broadcast Service, MM Docket No. 87-268.

Please contact this office directly if there are any questions concerning this matter.

Sincerely yours,

Theodore D. Kramer

TDK/jb
Enclosures (10)

Before the
**FEDERAL COMMUNICATIONS COMMISSION**
Washington, D.C. 20554



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| In the Matter of | ) | |
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| Advanced Television Systems | ) | |
| and Their Impact Upon the | ) | MM Docket No. 87-268 |
| Existing Television Broadcast | ) | |
| Service | ) | |

TO: The Commission

**COMMENTS OF MEREDITH CORPORATION ON THE SIXTH NOTICE OF PROPOSED RULEMAKING**

Respectfully submitted,

**MEREDITH CORPORATION**

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Its Attorney

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November 22, 1996

## SUMMARY

Meredith Corporation, licensee of seven television stations, supports most of the proposals in the Sixth NPRM as well as the Comments filed by the Broadcasters Caucus. There are three significant issues which Meredith address in its Comments.

The Commission should not create a "core spectrum" at this time. There is no sound technical basis to conclude that the low VHF band is unsuitable for DTV. Indeed, using this band for DTV would permit operation at significantly lower power than operation in the UHF band. The possibility of auctioning off the low VHF band for other uses is problematic at this time.

During the transition period, the Commission should permit broadcasters maximum flexibility to seek modifications to the DTV allocations. Real world applications may differ significantly from the mathematical models used to establish the initial table of allotments. The Commission should rely on an industry committee to review proposed changes and to forward to the Commission those which it determines are technically feasible. This process should be formalized to establish clear procedures to be followed.

Finally, rather than freeze pending applications for station modifications or condition them on the outcome of this proceeding, the Commission should grant protection to all modifications filed prior to the adoption of the Sixth NPRM to the extent that such modifications are otherwise grantable under the present rules.

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TO: The Commission

**COMMENTS OF MEREDITH CORPORATION ON THE SIXTH NOTICE OF PROPOSED RULEMAKING**

Meredith Corporation ("Meredith"), by its attorneys, hereby files this Comments in response to the Commission's *Sixth Further Notice of Proposed Rule Making* (FCC 96-207, released August 14, 1996) ("*Sixth NPRM*" or "*Sixth Notice*"). In support of its Comments, Meredith submits:

## I. INTRODUCTION

Meredith is the licensee of seven television stations.[1] Meredith has been a television broadcaster since 1948, and has provided continuous television service in such markets as Kansas City and Phoenix for more than 40 years. As such, Meredith has a keen interest in this proceeding as the FCC charts the course of one of the most fundamental changes in communications history --

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[1] The Meredith stations are:
KCTV, Channel 5, Kansas City, MO (CBS affiliate)
KPHO, Channel 5, Phoenix, AZ (CBS affiliate)
WNEM, Channel 5, Bay City-Saginaw, MI (CBS affiliate)
KVVU, Channel 5, Henderson (Las Vegas), NV (Fox affiliate)
WSMV, Channel 4, Nashville, TN (NBC affiliate)
WOFL, Channel 35, Orlando, FL (Fox affiliate)
WOGX, Channel 51, Ocala (Gainesville), FL (Fox affiliate)

the conversion from analog to digital transmission modes. Meredith's main interest in this proceeding is to ensure that it can continue to deliver free over-the-air television to its audience, some of whom are third and fourth generation viewers in families served by Meredith stations. So, while Meredith desires a smooth and efficient conversion for its own sake, it also will focus these comments from the perspective of those it serves, to highlight certain aspects of the *Sixth Notice* which particularly impact those viewers.

Meredith supports most of the proposals in the *Sixth Notice* as well as the Comments filed by the Broadcasters Caucus, which Meredith has signed. As supporters of the Broadcasters Caucus comments, Meredith requests that the Commission adopt the table proposed by the Broadcasters Caucus.

There are several issues, however, which Meredith believes need to be especially highlighted because of their impact on Meredith's ability to deliver programming to its viewers. These issues are:

A. The FCC's proposal to adopt a "core spectrum" concept at this stage of the proceeding;

B. The need for flexibility in any Table Of Allotments so that stations may easily substitute other technically feasible channels; and

C. The need to protect the contours of stations who have pending legitimate modification applications.

Meredith will address each issue in turn.

## II. THE COMMISSION SHOULD NOT LOCK IN A SPECIFIC "CORE SPECTRUM" DURING THE TRANSITION PERIOD

Meredith supports the Comments of the Broadcasters Caucus (hereinafter referred to as "BC Comments"),[2] Section III-B, which urge the Commission not to create a specific "core spectrum" at this point in the proceeding, earmarking specific blocks of spectrum it will recapture at various points during the transition period. As the BC Comments point out, there simply are too many *engineering* unknowns about how DTV will work in the real world to make what amounts to a multi-billion dollar decision on the basis of laboratory bench-tests. BC Comments at Section III-B.2 and B-3. Rather, as the Broadcasters Caucus urges, the Commission should wait to see how DTV systems work in the real world before deciding exactly which frequency bands will be recaptured. *Id.*

### A. THE COMMISSION SHOULD NOT RULE OUT ULTIMATE USE OF THE LOW VHF BAND FOR DTV

Of particular concern to Meredith is the Commission's conclusion in the *Sixth NPRM* that the low VHF band (channels 2-6) should be recaptured for ultimate auction. *Sixth NPRM*, par. 10, 16. This conclusion was reached based on the "tentative conclusion" that digital signals in the lower VHF band would

[2] Reference to the BC Comments are to sections rather than pages because the final version of the BC Comments were not available in time to incorporate specific page numbers.

be subject to unacceptable levels of signal degradation from man-made and atmospheric noise. *Id.* As demonstrated below, however, there are compelling reasons to use the low VHF frequencies for digital transmission which outweigh the value which the Federal government might obtain if they were to sell off those frequencies.

### 1. There Are No Technical Impediments To Using The Low VHF Frequencies For DTV Transmission

Contrary to the "tentative conclusion" reached in the *Sixth NPRM,* there is no sound basis to conclude that the low VHF frequencies are unsuited for DTV use. As the BC Comments point out, actual Advisory Committee on Advanced Television Systems ("ACATS") laboratory and field tests have concluded that the low VHF frequencies are "entirely suitable" for DTV use. BC Comments, Section III-B.2.

The broadcast industry grew up with the low VHF band, and broadcasters are fully aware of its transmission characteristics and quirks. They are fully cognizant of both the natural and man-made interference which can occur,[3] and have been able to engineer around such problems such that the low VHF band has been the mainstay of analog Television operations since the inception of television service. There is virtually no real world engineering data showing that digital transmissions in the low VHF band will perform any

[3] Meredith itself successfully operates 5 stations in the low VHF band.

worse[4]. Again, this is an issue which is best left to real-world engineering rather than *a priori* policy making. Meredith submits, therefore, that the Commission should wait until real world systems are born before declaring the low VHF band dead.

### 2. Use Of Low VHF Frequencies For DTV Transmission Will Allow For Much Lower Power Operation

Rather than presenting technical problems, use of the low VHF band offers some real benefits. For example, use of low VHF frequencies for DTV transmission would have the technical benefit of allowing stations to operate at much lower power than would be the case if they were required to operate on higher UHF frequencies. Given the Commission's primary goal of service replication,[5] this issue is of critical importance in the proceeding. The BC Comments point out the benefit of lower power operation that use of low VHF channels would have. BC Comments, Section III-B.2. This problem is exacerbated in situations where a station has a low VHF NTSC allocation, and an UHF DTV allocation. Meredith ran calculations for KCTV, its Kansas City, Missouri, station, that bear this out. KCTV's analog assignment is on Channel 5. Using 100 kw visual power, it covers 28,926 square kilometers, and 1,967,000 people. KCTV's proposed DTV channel is 46. Under the

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[4] To the extent that low VHF operations do experience slightly more interference than higher frequencies, this interference can be overcome by slightly increasing power levels. Given the extremely low power required to generate a replicating digital signal in the low VHF band, increasing power slightly to better the signal-to-noise ratio to overcome this interference should not pose a problems to the general allocation scheme.

[5] *Sixth NPRM* at paragraph. 13.

Commission's *Sixth NPRM* table, KCTV would have to operate Channel 46 in DTV mode with 3,984 kw power to achieve service replication, a power increase of nearly ***40 times***. Even under the Broadcast Coalition's Table, KCTV would need 1,989.5 kw of power to achieve service replication, or a ***20 times*** increase in power.

Such a dramatic increase in power ultimately leads to increased costs in building and operating such a facility. All components must be built to carry such power loads. In addition, operating at such high powers will result in substantially increased monthly costs. Indeed, based on prior Commission discussions of the power levels necessary to drive DTV systems, it is doubtful that the Commission ever envisioned systems operating at such high powers.[6]

Most important, moreover, Meredith believes that it will be nearly impossible to build such a high powered facility that would pass both the new Federal RF exposure limits,[7] *and* which would receive local zoning approval to be co-located with the existing analog facility, as contemplated by the FCC. It is much more likely that KCTV-DTV[8] would be required to operate at a more reasonable average power level. Meredith thus calculated its comparative coverage for KCTV-DTV, first assuming full digital power, then assuming a more reasonable power level of 400 kw, four times its existing peak analog

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[6] See Second Further Notice of Proposed Rulemaking, 7 FCC Rcd 5376 (1992).
[7] Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, 61 F.R. 41006 (August 7, 1996).
[8] For ease of identification Meredith will refer to any of its future digital facilities by this their call signs plus the "-DTV" suffix.

power.[9] The resulting contour maps of that study are appended hereto as Attachment 1. The table below shows the comparative coverage and population:

| DTV Power Level | DTV Area Covered | DTV Population Served |
|---|---|---|
| | | |
| 1966.7 kw | 35,901 | 2,105,384 |
| 400 kw | 27,113 | 1,909,657 |
| Difference | 8,788 | 195,707 |

The result of this study shows that if KCTV-DTV is required to operate on Channel 46, and it is not able to operate at the huge power level envisioned by the FCC, nearly 200,000 people will be disenfranchised, unable to view KCTV-DTV. This result certainly would not be in keeping with the Commission's stated goal of ensuring that free over-the-air digital television be as available as under the current NTSC analog system.[10]

The logical alternative, of course, is to allow KCTV-DTV eventually to migrate back to Channel 5, KCTV's current analog channel assignment. KCTV would be able to operate a DTV system on Channel 5 which could replicate its analog coverage at approximately 8 kw, a small fraction of the power required for an UHF DTV operation. From a technical standpoint, the choice is a classic

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[9] These comparisons were made from calculations using a coverage and interference model.

[10] If KCTV-DTV's situation is replicated by other stations and in other markets, it is possible that millions of U.S. citizens could wake up some time in the future and find that, even with their expensive new digital television sets they can no longer watch the television stations they have relied on for years to provide them news and information programming.

"no brainer." It appears that it is only because the FCC seeks to recapture a large contiguous block of frequencies for auction purposes that the low VHF spectrum is not part of the FCC's "core spectrum." Unfortunately, in a fight between public policy and the laws of physics, the laws of physics always win.

### 3. The Low VHF Frequencies Would Be The Last Analog Frequencies Which Could Be Recaptured For Auctioning

If the Commission is looking for a contiguous block of spectrum to recapture, the low VHF frequencies are the least practical candidates for a number of reasons. Paramount among these is the fact that of all the television spectrum, the low VHF frequencies probably will be the last which can be recaptured on a nationwide basis. As the BC Comments point out, there are currently 286 stations operating on channels 2-6, making it one of the most heavily congested television bands. BC Comments, Section III-B.2. The likelihood that all of the 286 stations will turn back in their NTSC licenses before the end of the transition period is very small. Moreover, many of those stations are located in major population centers, since the low VHF television band was the first allocated, and those allocations went to the major markets.

Further, since many of the low VHF stations are established network affiliates, most licensees will wish to operate them in analog mode as long as possible. This will be to ensure that the lowest income viewers who cannot

afford new digital sets or afford to subscribe to cable[11] will be able to receive critical news and information programming for the longest period possible until the price curve of receivers drops enough to allow them to purchase digital receivers, or at least forestall the day when they are cut off from television service.

Thus, the impact of a handful of late developers of DTV will be disproportionate in this band in terms of the number of people who could not be reached with some proposed alternative service using the low VHF frequencies.[12]

### 4. The Channel 3-4 VCR Problem Also Militates Against Reallocating Those Frequencies

The center of the low VHF band, channels 3 and 4, present another significant reallocation problem. As the Commission is well aware, current VCRs are tunable to either channel 3 or 4, depending on which channel is not allocated for television service in the market. If both channels 3 and 4 are recaptured, and reallocated to other uses, there is every likelihood that interference from these new services would render the 130 million VCRs in use today instantly obsolete, because of interference from the new services on these frequencies. This presents a double whammy for lower income viewers, who not only will be forced to replace their television sets in order to receive television

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[11] BC Comments, Sections III-B.1.

[12] This is compared to any similar 30 MHz contiguous block of the UHF spectrum, which would have far fewer stations allocated, and the chances would be that fewer of those stations would be located in major markets.

service, but will also have to replace their VCRs, or not be able to watch tapes, regardless of whether they can afford a new DTV receiver.[13] Much more likely, either channel 3 or 4 will have to be reserved for VCR use, thus breaking up the 30 Mhz of contiguous spectrum the Commission so desperately wants to recapture.

### 5. Removing The Low VHF Band From Consideration Lessens Station Flexibility

As the BC Comments make clear, and as echoed here, a great deal of flexibility is necessary if DTV service is to be implemented in a timely manner. Since so many technical questions still remain, stations need the ability to choose which channel ultimately will best serve their digital needs, their allocated DTV channel, or their original analog allotment. Congress contemplated that stations would have this flexibility in the 1996 Telecommunications Act, stating that stations must give back *either* of their two channels.[14] To *a priori* conclude that one third of all stations will not have this choice,[15] clearly violates Congressional intent.

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[13] The Commission's implicit solution of 'let them eat cable' ignores the reality of low income consumption of television service. BC comments, Section III-B.1. This triple whammy choice of, buy a new receiver, buy a new VCR, or buy cable, fundamentally fails to serve the public interest.

[14] *See* 47 U.S.C., Sec. 336 (c); BC Comments, Section II-B.2.

[15] *See* BC Comments, Section III-B.2 (286 existing licensees in channels 2-6 and 232 more in channels 52-69).

## 6. Removing The Low VHF Band Is Fundamentally Unfair

A system which allows one class of existing stations to have the choice of two frequencies for DTV operations, and denies that same choice to another class of stations is fundamentally unfair.

Permitting certain stations to operate on the high VHF band, but denying stations the option to return to the low VHF band will create a dramatic comparative advantage to those stations migrating back. They will have significant savings in connection with equipment costs, potential for RF radiation problems, as well as electric and other operating expenses.

The Commission's proposal instantly creates a caste system where those one-third of stations are second-class citizens who may well have to wait until stations with both channels in the "core spectrum" have implemented their DTV systems, made their ultimate channel choice, and then turned back in their analog license before the "peasant" station could even implement DTV. Such a nightmare scenario is not at all out of the question. It could happen like this: Station A, located in a major market in the Northeast has a low VHF analog allocation and a UHF digital allocation. In implementing its DTV system, it is found that the allocated digital channel simply will not work (e.g., from unanticipated analog interference). Since the FCC has adopted as a high priority the protection of existing analog signals, it must give way to the

established analog signal. Nor can it implement DTV on its low VHF channel, since it knows that it will have to completely reengineer the system in the future to move to a high UHF channel requiring more power, etc. Other digital signals are then difficult to find. At that point, Station A must wait "for the dust to settle" before it can implement DTV, which means it must wait until Station B (and Stations C, D & E for that matter), implement their DTV systems, choose which of their two "core spectrum" channels they ultimately want to keep, and then turn in the other license. One can imagine how quickly they will make that choice, given the incredible competitive windfall handed them by the FCC. They know that so long as they keep both licenses, they've been granted a headstart over Station A. The Commission at all costs must avoid providing a regulatory environment that allows such disparate treatment of stations. This is especially true where such an environment is a result of public policy decisions and not technical necessity.

### 7. Conclusion: Removing the Low VHF Band From DTV Operations At This Time Makes No Rational Sense

Based on the discussion above, there is no rational basis by which the FCC can conclude that Channels 2-6 should be declared off-limits to DTV operations. There certainly are no technical reasons why DTV can't work in that band, and indeed, there are compelling reasons for using that part of the band because of the lower power required, if the FCC wishes to provide free

over-the-air digital television to the maximum number of viewers possible. Moreover, given the existing congestion in that band, especially in large cities, where it can be expected that channels 2-6 would be the very last ones available for reallocation on a national basis, and the inherent problem of making all existing VCRs obsolete, the FCC should not include channels 2-6 as part of the spectrum it seeks to recapture in this proceeding.

## III. THE COMMISSION SHOULD PERMIT DTV STATIONS TO MODIFY THEIR ALLOCATIONS DURING THE TRANSITION PERIOD AND SANCTION AN INDUSTRY COMMITTEE TO OVERSEE THE PROCESS

Meredith fully supports the Broadcasters Caucus Comments urging the Commission to maximize station flexibility in implementing DTV. Throughout these comments, and those being filed by the Broadcasters Caucus, the point has been made that getting DTV from the laboratory to the real world will require changes to whatever table is adopted. No computer model, no matter how sophisticated, can hope to simulate the real world impact of DTV implementation. In everything from terrain differences to seasonal vegetation, there are environmental impacts on DTV operations that no computer model can fully simulate. As such, the FCC should expect to receive many dozens, if not hundreds, of modification requests.

Before that point is even reached, however, an engineering review of the various tables indicates that there are additional frequencies which meet all of

the technical requirements set forth by the FCC which would prove easier to implement than some allocated in the respective tables. For example, Meredith has studied the Las Vegas, Nevada, market, in which its station KVVU operates. Meredith had its outside consulting engineers review the Broadcasters Caucus table, and determined that Channel 9 could be utilized for DTV operations. It submitted a change request to the Broadcasters Caucus coordinating committee on October 29, 1996, and will pursue whatever procedures are established to seek that modification.[16]

The ad hoc committee put together by the Broadcasters Caucus in a few short weeks to meet the demands of the *Sixth NPRM* has proven its worth. That committee should be formalized, and charged with reviewing change requests, and forwarding those onto the Commission which it determines are technically feasible. *See* BC Comments, Section V-B.1. Moreover, as with other services, the industry committee should be directed to process and submit such changes to the Commission on a first-come, first-served basis.

## IV. THE COMMISSION SHOULD PROTECT NTSC CONTOURS OF STATIONS WITH MODIFICATION APPLICATIONS ON FILE PRIOR TO THE ISSUANCE OF THE *SIXTH NPRM*

In the *Sixth NPRM*, the Commission proposed a number of measures designed to "freeze" the state of existing analog stations and preclude new

[16] To the extent that the Commission itself will entertain modifications to whatever table it adopts in this rulemaking proceeding, Meredith hereby formally requests that its DTV assignment for KVVU in the Las Vegas market be Channel 9.

stations so that a stable table could be adopted. *Sixth NPRM*, pars. 57-63. With regard to freezing new facilities and eliminating vacant channels, Meredith is in perfect agreement. When it comes to modifications already on file, however, Meredith takes exception to paragraph 63. Meredith filed a modification for its Orlando station, WOFL, on June 26, 1996, to increase power to accompany the installation of a new transmitter. This power increase is necessary to better signal coverage over the geographically large and spread out Orlando-Daytona Beach-Cocoa-Melbourne-Clermont television market. To deny such an upgrade, which will allow for better service, solely in the name of administrative convenience, is not in the public interest. Rather than condition such applications on the outcome of this proceeding, Meredith urges the Commission to grant protection to all modifications filed prior to the adoption of the *Sixth NPRM*, to the extent that such modifications are otherwise grantable.

## V. CONCLUSION

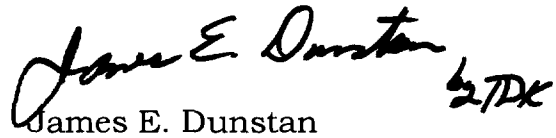
The regulatory aspects of the DTV revolution are in the "home stretch." Both the Commission and industry representatives are to be commended for their hard work and foresight. As a long-time broadcaster, Meredith can find much to support in the *Sixth NPRM*. After working closely with the Broadcasters Caucus, however, Meredith has concluded that the Broadcasters

Caucus approach to several issues, and ultimately the proposed table, are to be preferred to the tentative conclusions reached in the *Sixth NPRM*.

**WHEREFORE,** Meredith urges the Commission to adopt the Broadcast Caucus table, along with the proposals set forth in these comments.

Respectfully submitted,

**MEREDITH CORPORATION**



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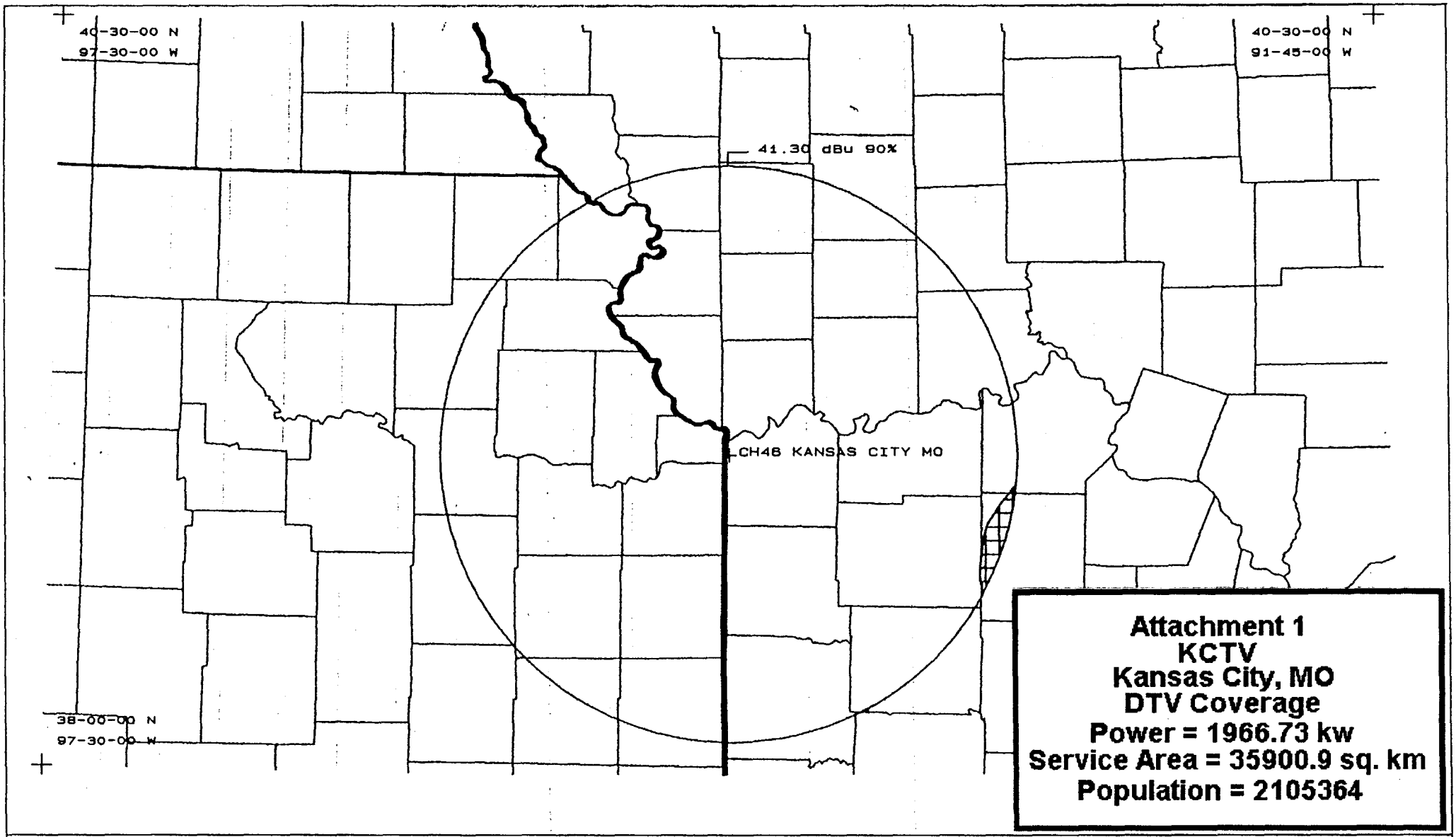
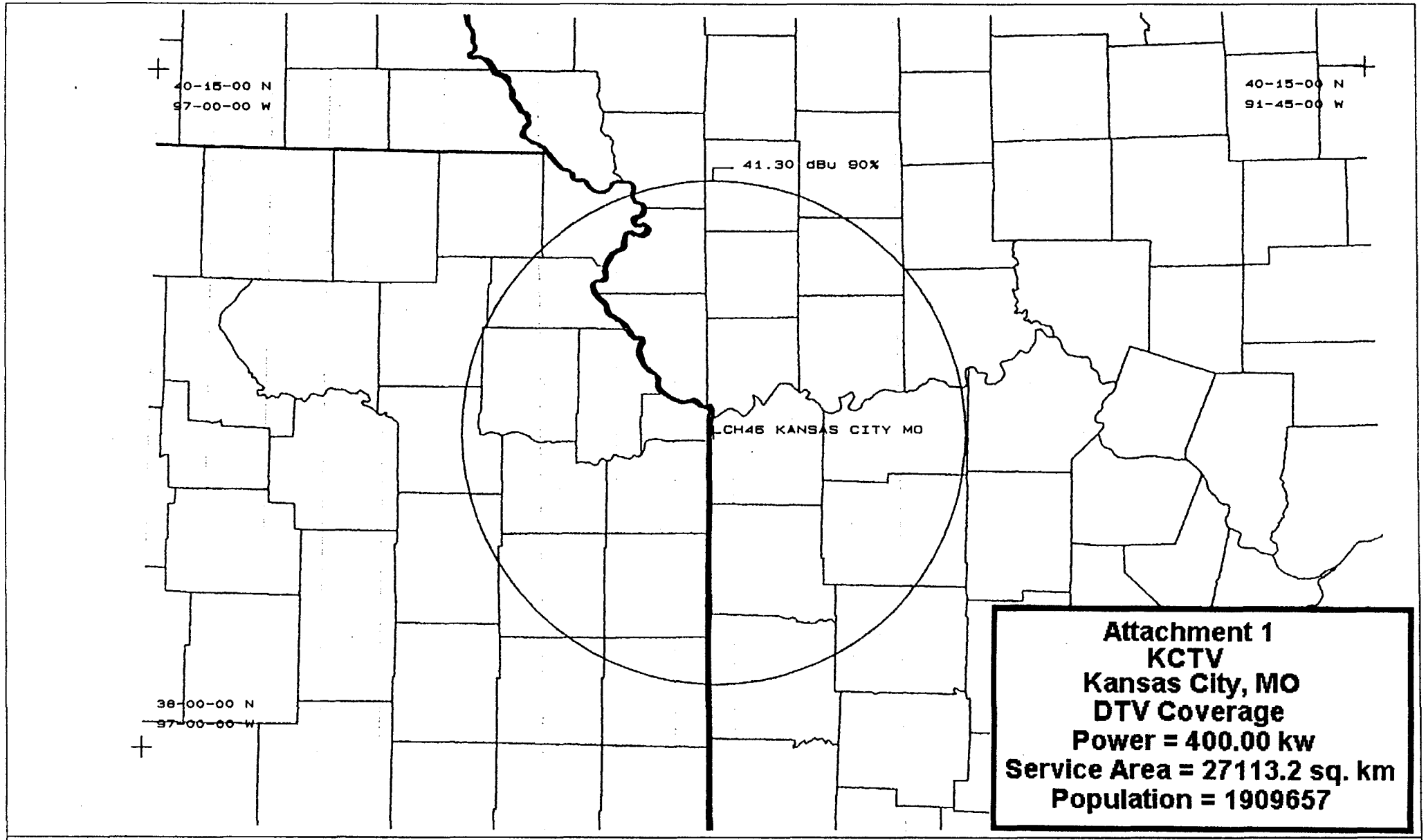
November 22, 1996




**Attachment 1**
**KCTV**
**Kansas City, MO**
**DTV Coverage**
**Power = 1966.73 kw**
**Service Area = 35900.9 sq. km**
**Population = 2105364**

DTV COVERAGE & INTERFERENCE- BC 10/96 Plan
KCTV(5), DTV(46), Kansas City, MO
CIM Model, Interference shown in blue
Date: 11 05 96 Scale points 39.10/ 94.60/150.00

MAJOR DIVISIONS ARE: 10.0 KM
SCALE IS: 50.74 KM/INCH
31.53 MILES/INCH




DTV COVERAGE & INTERFERENCE-BC Plan, ERP 400 kW
KCTV(5), DTV(46), Kansas City, MO
CIM Model, Interference shown in blue
Date: 11 05 96 Scale points 39.10/ 94.60/150.00

MAJOR DIVISIONS ARE: 10.0 KM
SCALE IS: 49.42 KM/INCH
30.71 MILES/INCH